

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to the applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

2. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

3. Authorization for this examiner's amendment was given in a telephone interview with Mr. Ryan Elliott on 10/22/2008.

4. Please replace all claims with the following:
 1. (Currently amended) An apparatus comprising:
a first queue to track a current rate of task completion;
a second queue to track an average rate of task completion over time;

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a comparator to compare an average of values stored in the first queue and an average of values stored in the second queue; and

a throttle to

reduce a number of connections available on the apparatus if the comparator indicates that the average of the first queue is larger than the average of the second queue, wherein the comparator triggers comparisons more often as the number of connections is decreased,

increase the number of connections available if the average rate of task completion is lower than the average of the average rates of task completion,

wherein the connections comprise network connections for sending messages, and wherein the apparatus comprises a multimedia messaging service center.

2. (Original) The apparatus of claim 1, wherein the first queue and the second queue are circular queues.

3. (Previously Presented) The apparatus of claim 1, further comprising:

a timer to compute a length of time a connection is used and insert the time into the first queue.

4. (Previously Presented) The apparatus of claim 1, wherein the average of values stored in the first queue is inserted into the second queue.

5. (Currently amended) The apparatus of claim 1, further comprising:
a trigger mechanism to trigger a comparison, the trigger mechanism triggering comparisons ~~more~~ less often as the number of connections is increased.
6. (Original) The apparatus of claim 5, further comprising:
a powers array to indicate when to trigger a comparison to the trigger mechanism, the powers array being an exponentially increasing/decreasing function.
7. (Original) The apparatus of claim 1, further comprising:
a sensitivity multiplier applied to the average of the second queue to affect reaction speed.
8. (Canceled)
9. (Previously Presented) The apparatus of claim 1, wherein the rate of task completion comprises timing one subtask of a complex task, the subtask reflecting a load on the apparatus.
- 10-19. (Cancelled)
20. (Currently amended) A method of resource allocation comprising:

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comparing a current average rate of task completion of a system to an average of averages, wherein the average of averages is the average of a plurality of the results of each of the current average rate of task completion over time;

reducing a number of tasks executed by the system if the current average rate of task completion is larger than the average of averages, wherein the comparison is triggered more frequently as the number of tasks executed is reduced; and

increasing the number of tasks executed by the system if the current average rate of task completion is less than the average of the averages, wherein the tasks executed by the system includes sending messages over a network from a multimedia messaging service center.

21. (Previously Presented) The method of claim 20, further comprising:

triggering the comparison based on a number of measurements of the current rate of task completion reaching a predetermined threshold.

22. (Previously Presented) The method of claim 21, further comprising:

adjusting the predetermined threshold based on results of a last comparison.

23. (Previously Presented) The method of claim 22, wherein the predetermined threshold is increased and the comparison is triggered less frequently if the system is speeding up.

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24. (Previously Presented) The method of claim 23, wherein the predetermined threshold is set by a powers array, the powers array being a powers-of-two array; and
the predetermined threshold is adjusted by shifting along the powers-of-two array to speed up or slow down the rate of triggering the comparison.

25. (Previously Presented) The method of claim 20, further comprising:
timing a period of time that a connection is used; and
inserting the period of time into a first queue, the average of the first queue being the current average rate of task completion.

26. (Previously Presented) The method of claim 25, further comprising:
inserting the average of the first queue into a second queue, the average of the second queue being the average of averages.

27. (Original) The method of claim 26, wherein the first queue and the second queue are circular queues.

28. (Original) The method 26, wherein the average of the first queue and the average of the second queue are calculated when a comparison is triggered.

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29. (Previously Presented) The method of claim 28, wherein a current average of the first queue is inserted into the second queue after the average of the second queue is calculated.

30. (Previously Presented) The method of claim 20, wherein the rate of task completion is determined by measuring a length of time required to complete one subtask of a complex task, the subtask reflecting an overall load on the system.

31. (Canceled)

32. (New) An apparatus comprising:

- a first queue to track a current rate of task completion;

- a second queue to track an average rate of task completion over time;

- a comparator to compare an average of values stored in the first queue and an average of values stored in the second queue;

- a throttle to reduce a number of connections available on the apparatus if the comparator indicates that the average of the first queue is larger than the average of the second queue, wherein the comparator triggers comparisons more often as the number of connections is decreased, wherein the connections comprise network connections for sending messages, and wherein the apparatus comprises a multimedia messaging service center; and

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a powers array to indicate when to trigger a comparison to the trigger mechanism, the powers array being an exponentially increasing/decreasing function.

33. (New) The apparatus of claim 32, wherein the rate of task completion comprises timing one subtask of a complex task, the subtask reflecting a load on the apparatus.

34. (New) An apparatus comprising:

a first queue to track a current rate of task completion;

a second queue to track an average rate of task completion over time;

a comparator to compare an average of values stored in the first queue and an average of values stored in the second queue;

a throttle to reduce a number of connections available on the apparatus if the comparator indicates that the average of the first queue is larger than the average of the second queue, wherein the comparator triggers comparisons more often as the number of connections is decreased, wherein the connections comprise network connections for sending messages, and wherein the apparatus comprises a multimedia messaging service center; and

a sensitivity multiplier applied to the average of the second queue to affect reaction speed.

35. (New) The apparatus of claim 34, wherein the rate of task completion comprises timing one subtask of a complex task, the subtask reflecting a load on the apparatus.

36. (New) A method of resource allocation comprising:

comparing a current average rate of task completion of a system to an average of averages, wherein the average of averages is the average of a plurality of the results of each of the current average rate of task completion over time;

reducing a number of tasks executed by the system if the current average rate of task completion is larger than the average of averages, wherein the comparison is triggered more frequently as the number of tasks executed is reduced, and wherein the tasks executed by the system includes sending messages over a network from a multimedia messaging service center; and

using a powers array to indicate when to trigger a comparison to the trigger mechanism, the powers array being an exponentially increasing/decreasing function.

37. (New) The method of claim 36, wherein the rate of task completion comprises timing one subtask of a complex task.

38. (New) A method of resource allocation comprising:

comparing a current average rate of task completion of a system to an average of averages, wherein the average of averages is the average of a plurality of the results of each of the current average rate of task completion over time;

reducing a number of tasks executed by the system if the current average rate of task completion is larger than the average of averages, wherein the comparison is

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triggered more frequently as the number of tasks executed is reduced, wherein the tasks executed by the system includes sending messages over a network from a multimedia messaging service center; and

applying a sensitivity multiplier to the average of averages to affect reaction speed.

39. (New) The method of claim 38, wherein the rate of task completion comprises timing one subtask of a complex task.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MENGYAO ZHE whose telephone number is (571)272-6946. The examiner can normally be reached on Monday Through Friday, 7:30 - 5:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on 571-272-3756. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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